

To: Durno, Mark[durno.mark@epa.gov]
Cc: Cassell, Peter[cassell.peter@epa.gov]
From: Scott Smith
Sent: Fri 4/8/2016 11:08:04 AM
Subject: FW: lead symptoms, in general- and surprisingly found that lead CAN cause rashes from ingestion!

Mark,

Below is what I received from Dr. Zelikoff – she did find that by ingestion or inhalation Lead can cause rashes.

I am wondering what Dr. Mona and/or Dr. Edwards think about the possible health symptoms in Flint being related to possible Lead Particulate Inhalation in bathtubs or showers?

Has anyone discussed this or brought this up?

Below from Dr. Zelikoff:

Subject: lead symptoms, in general- and surprisingly found that lead CAN cause rashes from ingestion!

By ingestion or inhalation, lead can create the following health symptoms after repeated exposure:

Signs of repeated lead exposure include:

- abdominal pain
- abdominal cramps
- aggressive behavior
- constipation
- sleep problems
- headaches
- irritability
- loss of developmental skills in children
- loss of appetite
- fatigue
- high blood pressure
- numbness or tingling in the extremities
- memory loss
- anemia
- kidney dysfunction

Little know outcome: The symptoms of lead poisoning (high levels of lead and repeated exposure) include reduced IQ, **rashes**, irritability, insomnia, excess lethargy or hyperactivity, poor

appetite, headache. In high amounts it can result in abdominal discomfort, nervous system damage, and encephalitis. At very high levels, lead can cause convulsions, coma and death. Chronic exposure is characterized by a blue line on the gums and can lead to damage to the brain, kidneys, nervous system, and red blood cells.